

**Commonwealth of Kentucky
Environmental and Public Protection Cabinet
Department for Environmental Protection
Division for Air Quality
803 Schenkel Lane
Frankfort, Kentucky 40601
(502) 573-3382**

**Title V
AIR QUALITY PERMIT
Issued under 401 KAR 52:020**

Permittee Name:	Tennessee Valley Authority
Mailing Address:	7900 Metropolis Lake Road West Paducah, Kentucky 42086-9414
Source Name:	TVA-Shawnee Fossil Plant
Mailing Address:	7900 Metropolis Lake Road West Paducah, Kentucky 42086-9414
Source Location:	7900 Metropolis Lake Road, West Paducah
Permit Number:	V-03-054
Log Number:	50078/E885
Review Type:	Title V, Operating
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ORIS Code:	1379
Regional Office:	Paducah Regional Office 4500 Clarks River Road Paducah, KY 42007 (270) 898-8468
County:	McCracken
Application Complete Date:	February 7, 1997
Issuance Date:	June 21, 2004
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**John S. Lyons, Director
Division for Air Quality**

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SECTION A - PERMIT AUTHORIZATION

Pursuant to a duly submitted application the Kentucky Division for Air Quality hereby authorizes the operation of the equipment described herein in accordance with the terms and conditions of this permit. This permit has been issued under the provisions of Kentucky Revised Statutes Chapter 224 and regulations promulgated pursuant thereto.

The permittee shall not construct, reconstruct, or modify any affected facilities without first having submitted a complete application and received a permit for the planned activity from the permitting authority, except as provided in this permit or in 401 KAR 52:020, Title V Permits.

Issuance of this permit does not relieve the permittee from the responsibility of obtaining any other permits, licenses, or approvals required by this Cabinet or any other federal, state, or local agency.

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

Emissions Units 01-09 - Nine Indirect Heat Exchangers

Pulverized coal-fired, dry-bottom, wall-fired units equipped with bagfilters and cyclones

Number two fuel oil used for startup and stabilization

Secondary fuel: Less than 5% of the boiler's heat input - wood waste, other nonhazardous waste materials such as used oil with less than 50 ppm PCB, boiler cleaning chemicals, solvents, oil-contaminated soil, rags, absorbent materials and filters.

Maximum continuous rating: 1,691 mmBtu/hour, each

Construction commenced: prior 1953, bagfilters were installed from 1979 through 1981.

Applicable Regulations:

401 KAR 61:015, Existing Indirect Heat Exchangers applicable to an emissions unit greater than 250 mmBtu/hour and commenced before August 17, 1971.

1. Operating Limitations:

None

2. Emission Limitations:

- a) Pursuant to 401 KAR 61:015, Section 4 (1), particulate emissions shall not exceed 0.11 lb/mmBtu.
- b) Pursuant to 401 KAR 61:015, Section 4 (2), emissions shall not exceed twenty (20) percent opacity based on a six-minute average, except: (1) that a maximum of forty (40) percent opacity shall be permissible for not more than one (1) six (6) minute period in any sixty (60) consecutive minutes; and (2) during building a new fire for the period required to bring the boiler up to operating conditions.
- c) Pursuant to 401 KAR 61:015, Section 5 (1), sulfur dioxide emissions shall not exceed 1.2 lbs/mmBtu based on a 24-hour average.

3. Testing Requirements:

- a) The permittee shall submit a schedule within six months from the issuance date of this permit to conduct at least one performance test for particulate within one year following the issuance of this permit. Opacity data from the Continuous Opacity Monitor (COM) obtained during the performance test shall be correlated with the particulate emission rate to establish an average opacity level pursuant to Condition 4.d below. The performance tests shall be conducted on the common stack for Units 01-05, the common stack for Units 06-10, and the main baghouse outlet for Unit 10.

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE

REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

- b) If no additional stack tests are performed pursuant to Condition 4.d), the permittee shall conduct a performance test for particulate emissions within the third year of the term of this permit to demonstrate compliance with the applicable standard.
- c) The permittee shall determine the opacity of emissions from the stack by EPA Reference Method 9 for determination of compliance with the opacity standard annually, or more frequently if requested by the Division.

4. Specific Monitoring Requirements:

- a) Pursuant to 401 KAR 61:005, Section 3 and material incorporated by reference 401 KAR 52:020, Section 10, continuous emission monitoring systems shall be installed, calibrated, maintained, and operated for measuring sulfur dioxide emissions and either oxygen or carbon dioxide emissions. The continuous emission monitoring systems shall comply with 401 KAR 61:005, Section 3, particularly, performance specification 2 of Appendix B to 40 CFR 60 or 40 CFR 75, Appendix A.
- b) In accordance with 401 KAR 61:015, Section 6 (1), the sulfur content of solid fuels, as burned shall be determined in accordance with methods specified by the Division. The permittee may use the certification from the fuel supplier to satisfy this requirement. The fuel supplier certification shall include the name of the coal supplier and a statement from the coal supplier that the coal complies with the specifications under the definition of fuel coal specified in the regulation.
- c) In accordance with 401 KAR 61:015, Section 6 (3) the rate of each fuel burned shall be measured daily and recorded. The heating value and ash content of fuels shall be determined at least once per week and recorded. The permittee may use the certification from the fuel supplier to satisfy this requirement. The average electrical output, and the minimum and maximum hourly generation rate shall be measured and recorded daily.
- d) Pursuant to material incorporated by reference by 401 KAR 52:020, Section 10, to meet the periodic monitoring requirement for particulate, the permittee shall use a continuous opacity monitor (COM). The average opacity level, determined pursuant to condition 3.a above, plus 5% opacity, will become the opacity trigger level. Excluding the startup, shut down, and once per hour exemption periods, if any six-minute average opacity value exceeds the opacity standard, the permittee shall, as appropriate, initiate an inspection of the control equipment and/or the COM system and make any necessary repairs. If five (5) percent or greater of COM data (excluding startup, shut down, and malfunction periods, data averaged over six minute period) recorded in a calendar quarter show excursions above the opacity trigger level, the permittee shall perform a stack test in the following calendar quarter to demonstrate compliance with the particulate standard while operating at representative conditions. The permittee shall submit a compliance test protocol as required by condition Section G (a)(17) of this permit before conducting the test. The Division may waive this testing requirement upon a demonstration that the cause(s) of the excursions have been corrected, or may require stack tests at any time pursuant to 401 KAR 50:045, Performance tests.

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE

REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

- e) Pursuant to material incorporated by reference by 401 KAR 52:020, Section 10, to meet the periodic monitoring requirement for opacity, the permittee shall use a continuous opacity monitor (COM). Excluding the startup, shutdown, and once per hour exemption periods, if any six-minute average opacity value exceeds the opacity standard, the permittee shall, as appropriate, initiate an inspection of the control equipment and/or COM system and make any necessary repairs. If any visible emissions are seen, then opacity must be determined using Reference Method 9, or by accepting the concurrent readout from the COM and perform an inspection of the control equipment and make any necessary repairs. If a Method 9 cannot be performed, the reason for not performing the test shall be documented.
- f) Pursuant to material incorporated by reference by 401 KAR 50:020, Section 10, to meet the periodic monitoring requirement for sulfur dioxide, the permittee shall use a continuous emission monitor (CEM) Excluding the startup and shutdown periods, if any 24-hour average sulfur dioxide value exceeds the standard, the permittee shall, as appropriate, initiate an investigation of the cause of the exceedance and/or the CEM system and make any necessary repairs or take corrective actions as soon as practicable.
- g) Pursuant to 401 KAR 61:005, Section 3, a continuous monitoring system for opacity shall conform to requirements of this section which include installing, calibrating, operating, and maintaining the continuous monitoring system for accurate opacity measurement, and demonstrating compliance with the applicable Performance Specification 1 of 40 CFR 60, Appendix B.
- h) Pursuant to 401 KAR 61:005, Section 3(5), the Division may provide a temporary exemption from the monitoring and reporting requirements of 401 KAR 61:005, Section 3, for the continuous monitoring system during any period of monitoring system malfunction, provided that the source owner or operator shows, to the Division's satisfaction, that the malfunction was unavoidable and is being repaired as expeditiously as practicable.

5. Specific Record Keeping Requirements:

- a) Records shall be kept in accordance with 401 KAR 61:005, Section 3(16) (f) and 401 KAR 61:015, Section 6. Percentage of the COM data (excluding startup, shutdown, and malfunction data) showing excursions above the opacity standard in each calendar quarter shall be computed and recorded.
- b) The permittee shall maintain records of the COM data on a three-hour rolling average basis, the number of excursions above the indicator range, time and date of excursions, opacity value of the excursions, and percentage of the COM data showing excursions from the indicator range in each calendar quarter.
- c) The permittee shall maintain the results of all compliance tests.

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

6. Specific Reporting Requirements:

- a) Pursuant to 401 KAR 61:005, Section 3 (16), minimum data requirements which follow shall be maintained and furnished in the format specified by the Division.
 - 1. 1. Owners or operators of facilities required to install continuous monitoring systems for opacity and sulfur dioxide or those utilizing fuel sampling and analysis for sulfur dioxide emissions shall submit for every calendar quarter, a written report of excess emissions and the nature and cause of the excess emissions if known. The averaging period used for data reporting should correspond to the emission standard averaging period which is a twenty-four (24) hour averaging period. All quarterly reports shall be postmarked by the thirtieth (30th) day following the end of each calendar quarter.
 - 2. For opacity measurements, the summary shall consist of the magnitude in actual percent opacity of six (6) minute averages of opacity greater than the opacity standard in the applicable standard for each hour of operation of the facility. Average values may be obtained by integration over the averaging period or by arithmetically averaging a minimum of four (4) equally spaced, instantaneous opacity measurements per minute. Any time period exempted shall be considered before determining the excess average of opacity.
 - 3. For gaseous measurements the summary shall consist of hourly averages in the units of the applicable standard.
 - 4. The date and time identifying each period during which the continuous monitoring system was inoperative, except for zero and span checks, and the nature of system repairs or adjustments shall be reported. Proof of continuous monitoring system performance is required as specified by the Division whenever system repairs or adjustments have been made.
 - 5. When no excess emissions have occurred and the continuous monitoring system(s) have not been inoperative, repaired, or adjusted, such information shall be included in the report.
- b) The permittee shall report the number of excursions (excluding startup, shutdown, malfunction data) above the opacity standard, date and time of excursions, opacity value of the excursions, and percentage of the COM data showing excursions above the opacity standard in each calendar quarter.

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

7. Specific Control Equipment Operating Conditions:

- a) The bagfilters and cyclones shall be continuously operated to maintain compliance with permitted emission limitations, in accordance with manufacturer's specifications and/or good operating practices.
- b) Records regarding the maintenance of the bagfilters and cyclones shall be maintained.
- c) See Section E for further requirements.

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Emissions Unit 10 (10) - Indirect Heat Exchanger

Description:

Fluidized-bed combustor, coal-fired, bubbling-bed, fly ash reinjection unit equipped with bagfilter and cyclone

Number two fuel oil used for startup and stabilization

Secondary fuel: Less than 5% of the boiler's heat input other nonhazardous waste materials such as used oil with less than 50 ppm PCB, boiler cleaning chemicals, solvents, oil-contaminated soil, rags, absorbent materials and filters.

Maximum continuous rating: 1,800 mmBtu/hour

Construction commenced in 1988

Applicable Regulations:

401 KAR 59:016, New Electric Utility Steam Generating Units

401 KAR 60:005, incorporating by reference 40 CFR 60, Subpart Da, Standards of Performance for Electric Utility Steam Generating Units applicable to an emission unit with a capacity of more than 250 mmBtu per hour and commenced on or after September 19, 1978.

401 KAR 51:017, Prevention of significant deterioration of air quality applicable to major construction or modification commenced after September 22, 1982.

1. Operating Limitations:

None

2. Emission Limitations:

- a) Pursuant to 401 KAR 59:016, Section 3(1), and 401 KAR 51:017, particulate emissions shall be reduced by 99 percent of potential combustion concentration and shall not exceed 0.03 lb/mmBtu.
- b) Pursuant to 401 KAR 59:016, Section 6(1), compliance with the particulate matter mass emission limitation will constitute compliance with the percent reduction requirement as stated in the emission limitation.
- c) Pursuant to 401 KAR 59:016, Section 3(2), emissions shall not exceed twenty (20) percent opacity based on a six-minute average except: (1) a maximum of twenty-seven (27) percent opacity shall be permissible for not more than one (1) 6-minute period per hour; and (2) during periods of malfunction, shutdown and startup.

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

- d) Pursuant to 401 KAR 59:016, Section 4(1), sulfur dioxide emissions shall be reduced by ninety (90) percent and shall not exceed 1.2 lbs/mmBtu or shall be reduced by seventy (70) percent and shall not exceed 0.60 lb/mmBtu based on a thirty (30) day rolling average.
- e) Pursuant to 401 KAR 59:016, Section 5(1)(c), nitrogen oxides emission shall be reduced by 65 percent of potential combustion concentration and shall not exceed 0.6 lb/mmBtu based on a thirty (30) day rolling average.

Pursuant to 401 KAR 59:016, Section 6(2), compliance with the nitrogen oxides mass emission limitation will constitute compliance with the percent reduction requirement as stated in the emission limitation.

- f) Pursuant to 401 KAR 51:017, carbon monoxide emission shall not exceed 0.4 lb/mmBtu.
- g) Pursuant to 401 KAR 59:016, Section 6(3), particulate matter and nitrogen oxides emission standards apply at all times except during periods of startup, shutdown, or malfunction. The sulfur dioxide emission standard apply at all times except during periods of startup, shutdown, or when both emergency conditions exist and the procedures under 401 KAR 59:016, Section 6(4) are implemented.

3. Testing Requirements:

- a) The permittee shall submit a schedule within six months from the issuance date of this permit to conduct at least one performance test for particulate within one year following the issuance of this permit. Opacity data from the Continuous Opacity Monitor (COM) obtained during the performance test shall be correlated with the particulate emission rate to establish an average opacity level pursuant to Condition 4.a below.
- b) If no additional stack tests are performed pursuant to Condition 4.a), the permittee shall conduct a performance test for particulate emissions within the third year of the term of this permit to demonstrate compliance with the applicable standard.
- c) The permittee shall determine the opacity of emissions from the stack by EPA Reference Method 9 for determination of compliance with the opacity standard annually, or more frequently if requested by the Division

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**4. Specific Monitoring Requirements:**

- a) Pursuant to material incorporated by reference by 401 KAR 52:020, Section 10, to meet the periodic monitoring requirement for particulate, the permittee shall use a continuous opacity monitor (COM). The average opacity level, determined pursuant to condition 3.a above, plus 5% opacity, will become the opacity trigger level. Excluding the startup, shut down, and once per hour exemption periods, if any six-minute average opacity value exceeds the opacity standard, the permittee shall, as appropriate, initiate an inspection of the control equipment and/or the COM system and make any necessary repairs. If five (5) percent or greater of COM data (excluding startup, shut down, and malfunction periods, data averaged over six minute period) recorded in a calendar quarter show excursions above the opacity trigger level, the permittee shall perform a stack test in the following calendar quarter to demonstrate compliance with the particulate standard while operating at representative conditions. The permittee shall submit a compliance test protocol as required by condition Section G (a)(17) of this permit before conducting the test. The Division may waive this testing requirement upon a demonstration that the cause(s) of the excursions have been corrected, or may require stack tests at any time pursuant to 401 KAR 50:045, Performance tests.
- b) Pursuant to material incorporated by reference by 401 KAR 52:020, Section 10, to meet the periodic monitoring requirement for opacity, the permittee shall use a continuous opacity monitor (COM). Excluding the startup, shut down, and once per hour exemption periods, if any six-minute average opacity value exceeds the opacity standard, the permittee shall, as appropriate, initiate an inspection of the control equipment and/or COM system and make any necessary repairs. If any visible emissions are seen, then opacity must be determined using Reference Method 9, or by accepting the concurrent readout from the COM and perform an inspection of the control equipment and make any necessary repairs. If a Method 9 cannot be performed, the reason for not performing the test shall be documented.
- c) Pursuant to material incorporated by reference by 401 KAR 52:020, Section 10, to meet the periodic monitoring requirement for sulfur dioxide, the permittee shall use a continuous emission monitor (CEM) Excluding the startup and shut down periods, if any 30-day rolling average emission or percent reduction value exceeds the standard, the permittee shall, as appropriate, initiate an investigation of the cause of the exceedance and/or the CEM system and make any necessary repairs or take corrective actions as soon as practicable.

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE

REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

- d) Pursuant to 401 KAR 59:016, Section 7(2), the permittee shall monitor sulfur dioxide emission using continuous monitoring system at both the inlet and outlet of the sulfur dioxide control device. An “as fired” fuel monitoring system meeting the requirements of Reference Method 19 may be used to determine potential sulfur dioxide emissions in place of a continuous emission monitor at the inlet of the sulfur dioxide control device.
- e) Pursuant to 401 KAR 59:016, Section 7(3), the permittee shall install, calibrate and operate a continuous monitoring system, and record the output of the system for measuring nitrogen oxides emissions discharged to the atmosphere.
- f) Pursuant to 401 KAR 59:016, Section 7(5), all the continuous emission monitoring systems shall be operated and data shall be recorded during all periods of operation of the emissions units including periods of startup, shutdown, malfunction or emergency conditions, except for continuous monitoring system breakdowns, repairs, calibration checks, and zero and span adjustments.
- g) Pursuant to n 401 KAR 59:016, Section 7(6), when emission data are not obtained because of continuous monitoring system breakdowns, repairs, calibration checks, and zero and span adjustments, the permittee shall obtain emission data by using other monitoring systems as approved by the Division or the reference methods as described in 401 KAR 59:016, Section 7(8) to provide emission data for a minimum of eighteen hours in at least twenty-two out of thirty successive boiler operating days.
- h) Pursuant to 401 KAR 59:016, Section 7(9), the following procedures shall be used to conduct monitoring system performance evaluations and calibration checks as required under 401 KAR 59:005, Section 4(3).
 - 1. Reference Method 6 or 7, as applicable shall be used for conducting performance evaluations of sulfur dioxide and nitrogen oxides continuous emission monitoring systems.
 - 2. Sulfur dioxide or nitrogen oxides, as applicable, shall be used for preparing calibration mixtures under Performance Specification 2 of Appendix B to 40 CFR 60 filed by reference in 401 KAR 50:015.
 - 3. The span value for the continuous monitoring system for measuring opacity shall be between sixty (60) and eighty (80) percent and for the continuous monitoring system for measuring nitrogen oxides shall be 1,000 ppm.

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE

REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

4. The span value for the continuous monitoring system for measuring sulfur dioxide at the inlet to the sulfur dioxide control device shall be 125 percent of the maximum estimated hourly potential emissions of the fuel fired, and at the outlet of the control device shall be 50 percent of the maximum estimated hourly potential emissions of the fuel fired.

5. Specific Record Keeping Requirements:

- a) Pursuant to 401 KAR 59:005, Section 3(4), the owner or operator of the indirect heat exchanger shall maintain a file of all measurements, including continuous monitoring system, monitoring device, and performance testing measurements; all continuous monitoring system performance evaluations; all continuous monitoring system or monitoring device calibration checks; adjustments and maintenance performed on these systems and devices; and all other information required by 401 KAR 59:005 recorded in a permanent form suitable for inspection.
- b) Pursuant to 401 KAR 59:005, Section 3(2), the owner or operator of this unit shall maintain the records of the occurrence and duration of any startup, shutdown, or malfunction in the operation of the affected facility, any malfunction of the air pollution control equipment; or any period during which a continuous monitoring system or monitoring device is inoperative.
- c) The permittee shall maintain records of the COM data on a three-hour rolling average basis, the number of excursions above the indicator range, time and date of excursions, opacity value of the excursions, and percentage of the COM data showing excursions from the indicator range in each calendar quarter.
- d) The permittee shall maintain the results of all compliance tests.

6. Specific Reporting Requirements:

- a) Pursuant to 401 KAR 59:005, Section 3(3), minimum data requirements which follow shall be maintained and furnished in the format specified by the Division. Owners or operators of facilities required to install continuous monitoring systems shall submit for every calendar quarter a written report of excess emissions (as defined in applicable sections) to the Division. All quarterly reports shall be postmarked by the thirtieth (30th) day following the end of each calendar quarter and shall include the following information:

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

1. The magnitude of the excess emission computed in accordance with the 401 KAR 59:005, Section 4(8), any conversion factors used, and the date and time of commencement and completion of each time period of excess emissions.
2. All hourly averages shall be reported for sulfur dioxide and nitrogen oxides monitors. The hourly averages shall be made available in the format specified by the Division.
3. Specific identification of each period of excess emissions that occurs during startups, shutdowns, and malfunctions of the affected facility. The nature and cause of any malfunction (if known), the corrective action taken or preventive measures adopted.
4. The date and time identifying each period during which continuous monitoring system was inoperative except for zero and span checks and the nature of the system repairs or adjustments.
5. When no excess emissions have occurred or the continuous monitoring system(s) have not been inoperative, repaired, or adjusted, such information shall be stated in the report.
6. For sulfur dioxide and nitrogen oxides, all information listed in 401 KAR 59:016, Section 9(2) shall be reported to the Division for each twenty-four (24) hour period.
7. If the minimum quantity of emission data as required by 401 KAR 59:016, Section 7(6) is not obtained for any thirty successive boiler operating days, the permittee shall report all the information listed in 401 KAR 59:016, Section 9(3) for that thirty day period.
8. If any sulfur dioxide standards as specified in 401 KAR 59:016, Section 4 are exceeded during emergency conditions because of control system malfunction, the permittee shall submit a signed statement including all information as described in 401 KAR 59:016, Section 9(4).
9. If fuel pretreatment credit toward the sulfur dioxide emission standard under 401 KAR 59:016, Section 4 is claimed, the permittee shall submit a signed statement including all information as described in 401 KAR 59:016, Section 9(5).

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

10. For any periods for which opacity, sulfur dioxide or nitrogen oxides emissions data are not available, the permittee shall submit a signed statement pursuant to 401 KAR 59:016, Section 9(6) indicating if any changes were made in the operation of the emission control system during the period of data unavailability. Operations of control system and emissions units during periods of data unavailability are to be compared with operation of the control system and emissions units before and following the period of data unavailability.
 11. The permittee shall submit a signed statement including all information as described in 401 KAR 59:016, Section 9(7).
 12. Pursuant to 401 KAR 59:016, Section 9(8), periods of excess emissions are defined as all six (6) minute periods during which the average opacity exceeds the applicable opacity standards as specified in Subsection 2 of this section. Opacity levels in excess of the applicable opacity standard and the date of such excesses are to be submitted to the Division each calendar quarter.
- b) The permittee shall report the number of excursions above the indicator range, date and time of excursions, opacity value of the excursions, and percentage of the COM data showing excursions from the indicator range in each calendar quarter.

7. Specific Control Equipment Operating Conditions:

- a) The bagfilter and cyclone shall be continuously operated to maintain compliance with permitted emission limitations, in accordance with manufacturer's specifications and / or standard operating practices.
- b) Records regarding the maintenance of the control equipments shall be maintained.
- c) See Section E for further requirements.

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Emissions Unit 11 (02) - Indirect Heat Exchanger (2 Heating Boilers, HB1-HB2)

Description:

Number two fuel oil-fired
Maximum continuous rating: 10 mmBtu/hr, each
Construction commenced: 1953

Applicable Regulations:

401 KAR 61:015, Existing Indirect Heat Exchangers, commenced before August 17, 1971, and Regulation 7, Prevention and Control of Emissions of Particulate Matter from Combustion of Fuel in Indirect Heat Exchangers

1. Operating Limitations:

None

2. Emission Limitations:

- a) Pursuant to 401 KAR 61:015, Section 4 (4), and Regulation No. 7, particulate emissions shall not exceed 0.11 lb/mmBtu based on a three-hour average.
- b) Pursuant to 401 KAR 61:015, Section 4 (4), and Regulation No. 7, emissions shall not exceed 20 percent opacity based on a six-minute average except that a maximum of 40 percent opacity is allowed for a period or aggregate of periods not more than six minutes in any sixty minutes.
- c) Pursuant to 401 KAR 61:015, Section 5 (1), sulfur dioxide emissions shall not exceed 0.8lb/mmBtu based on a twenty-four-hour average

3. Testing Requirements:

When the unit is in operation, the permittee shall perform a qualitative visual observation of the opacity from the stack once per day and maintain a log of the observations. If visible emissions are seen, the permittee shall log that in the record, determine the opacity of emissions by Reference Method 9 (weather permitting), and instigate an inspection of the units for any necessary repairs.

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

4. Specific Monitoring Requirements:

- a) Pursuant to 401 KAR 61:015, Section 6 (2), the sulfur content of liquid fuels, as burned, shall be determined based on certification from the fuel supplier. The fuel supplier certification shall include the name of the oil supplier and a statement from the oil supplier that the oil complies with the specifications under the definition of distillate fuel oil as specified in the regulation.
- b) In accordance with 401 KAR 61:015, Section 6 (3), the rate of fuel burned shall be measured daily.

5. Specific Record Keeping Requirements:

- a) Records documenting the amount of fuel oil consumed shall be maintained.
- b) Records documenting the sulfur content and heating value of the fuel oil shall be maintained.
- c) The permittee shall keep the results of all compliance tests.

6. Specific Reporting Requirements:

See Section F.

7. Specific Control Equipment Operating Conditions:

NA

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Emissions unit 12 (02,05,06) -Coal Handling Operations

Description:

Equipment includes: AFBC fuel prep, AFBC coal conveyor transfer point (BC-13 to BC-14), and AFBC coal bunker and conveyor BC-14 Discharge. Controlled by bagfilters

Operating rate: 700 tons/hour

Construction commenced: 1988

Applicable Regulations:

401 KAR 60:005, incorporating by reference 40 CFR 60 Subpart Y, Standards of Performance for Coal Preparation Plants that commenced after October 24, 1974.

401 KAR 51:017, Prevention of significant deterioration of air quality applicable to major construction or modification commenced after September 22, 1982.

1. Operating Limitations:

None

2. Emission Limitations:

Pursuant to 40 CFR 60.252, the owner or operator shall not cause to be discharged into the atmosphere from any coal processing and conveying equipment, coal storage system, or transfer and loading system processing coal, gases which exhibit 20 percent opacity or greater.

3. Testing Requirements:

Pursuant to 40 CFR 60.254, EPA Reference Method 9 and the procedures in 40 CFR 60.11 shall be used to determine opacity upon request by the Division.

4. Specific Monitoring Requirements:

The permittee shall perform a qualitative visual observation of the opacity of emissions from each stack on a weekly basis and maintain a log of the observations. If visible emissions from any stack are seen then the permittee shall determine the opacity of emissions by Reference Method 9 and instigate an inspection of the control equipment making any necessary repairs

5. Specific Record Keeping Requirements:

Records of the fossil fuels processed shall be maintained for emissions inventory purposes.

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

6. Specific Reporting Requirements:

See Section F.

7. Specific Control Equipment Operating Conditions:

- a) The enclosures and bagfilters shall be operated and maintained as necessary to maintain compliance with permitted emission limitations, in accordance with manufacturer's specifications and/or standard operating practices.
- b) Records regarding the maintenance of the control equipment shall be maintained.
- c) See Section E for further requirements.

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Emissions Unit 13A (4, 32, 33, 39, 40, 41, 42, 43, & 44) – Coal Handling

Description:

Equipment includes: Screening and Crushing Building & Facilities; Rotary and/or Bottom Dump to Hopper at Railcar Unloader; Hopper Discharge to Conveyor BC-1; Discharge from Conveyor BC-3 and BC-4 to Conveyor BC-6, BC-7, or BC-13; Discharge from Trippers 1&2 to Bunkers; Discharge from Conveyor BC-5 to Yard Conveyor or Auxiliary Stockout Conveyor; Discharge from Yard Conveyor to Elevating Conveyor; Discharge from Elevating Conveyor to Boom Conveyor; Discharge from Boom Conveyor to Coal Storage Yard

Controls: Enclosures and Foam Suppression Carryover

Maximum Operating Rates:

1. Screening and Crushing Building, 2500 tons per hour
2. Rotary and/or Bottom Dump to Hopper at Railcar Unloader, 2500 tons per hour
3. Hopper Discharge to Conveyor BC-1, 2500 tons per hour
4. Discharge from Conveyor BC-5 to Yard Conveyor (BC-25) or Auxiliary Stockout Conveyor, 2500 tons per hour

Construction commenced: 2000

- 5(a). Discharge from Yard Conveyor (BC-25) to Elevating Conveyor [Stock-out], 2500 tons per hour
- 5(b). Discharge from Elevating Conveyor to Boom Conveyor [Stock-out], 2500 tons per hour
- 5(c). Discharge from Boom Conveyor to Coal Storage Yard [Stock-out], 2500 tons per hour

Construction commenced: 1989

6. Discharge from Conveyor BC-3 and BC-4 to Conveyor BC-6, BC-7, or BC-13, 2400 tons per hour
7. Discharge from Trippers 1&2 to Bunkers, 2400 tons per hour
- 8(a). Bucket Wheel Discharge to Boom Conveyor [Reclaim], 2500 tons per hour
- 8(b). Boom Conveyor Discharge to Yard Conveyor (BC-25) [Reclaim], 2500 tons per hour
- 8(c). Discharge from Yard Conveyor (BC-25) to Surge Bin [Reclaim], 2500 tons per hour

Construction commenced: 1998

Applicable Regulations:

401 KAR 60:250, Standards of performance for coal preparation plants, incorporating by reference 40 CFR 60 Subpart Y for emissions units commenced after October 24, 1974.

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE

REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

1. Operating Limitations:

None.

2. Emission Limitations:

Pursuant to 401 KAR 60:250, 40 CFR 60.252, the owner or operator subject to the provisions of this regulation shall not cause to be discharged into the atmosphere from any coal processing and conveying equipment, coal storage system, or transfer and loading system processing coal, gases that exhibit 20 percent opacity or greater.

3. Testing Requirements:

Pursuant to 401 KAR 60:250, 40 CFR 60.254, EPA Reference Method 9 and the procedures in 40 CFR 60.11(b) shall be used to determine opacity at least annually, or more frequently if requested by the Division.

4. Specific Monitoring Requirements:

The permittee shall perform a qualitative visual observation of the opacity of emissions from each emissions unit on a weekly basis and maintain a log of the observations. If visible emissions are seen, the permittee shall determine the opacity of emissions by Reference Method 9 and instigate an inspection of the control equipment, making any necessary repairs.

5. Specific Record Keeping Requirements:

Records of the coal and pet coke received and processed shall be maintained.

6. Specific Reporting Requirements:

See Section F.

7. Specific Control Equipment Operating Conditions:

- a) The enclosures and foam suppression carryover shall be used/operated as necessary to maintain compliance with permitted emission limitations, in accordance with manufacturer's specifications and/or standard operating practices.
- b) Records regarding the maintenance of the control equipment shall be maintained.
- c) See Section E for further requirements.

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE

REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Emissions Unit 13B (7) – Coal Storage Yard

Description:

Equipment includes: Coal Storage Yard

Construction commenced: 1998

Maximum Operating Rate: 2500 tons per hour

Applicable Regulations:

401 KAR 63:010, Fugitive Emissions

1. Operating Limitations:

- a) Pursuant to 401 KAR 63:010, Section 3, reasonable precautions shall be taken to prevent particulate matter from becoming airborne. Such reasonable precautions shall include, when applicable, but not be limited to the following:
 - 1. Application and maintenance of asphalt, application of oil, water, or suitable chemicals on roads, material stockpiles, and other surfaces which can create airborne dusts;
 - 2. Installation and use of hoods, fans, and fabric filters to enclose and vent the handling of dusty materials, or the use of water sprays or other measures to suppress the dust emissions during handling;
- b) Pursuant to 401 KAR 63:010, Section 3, discharge of visible fugitive dust emissions beyond the property line is prohibited.

2. Emission Limitations:

None

3. Testing Requirements:

None

4. Specific Monitoring Requirements:

The permittee shall monitor the amount of coal received.

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

5. Specific Record Keeping Requirements:

Records of the amount of coal received shall be maintained.

6. Specific Reporting Requirements:

See Section F.

7. Specific Control Equipment Operating Conditions:

None

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Emissions Unit: 14 (12,13,15) - Limestone Handling and Processing

Description:

Equipment includes: Limestone conditioner building, limestone recycle conveyor (BC-L-3) transfer to BC-L-2, and limestone products conveyor & bunker

Construction commenced: 1988

Control: Bagfilter/Foam carryover

Maximum Operating Rates:

1. Limestone conditioner building: 400 tons per hour
2. Limestone recycle conveyor (BC-L-3) transfer to BC-L-2: 200 tons per hour
3. Limestone products conveyor & bunker: 200 tons per hour each

Applicable Regulations:

401 KAR 60:670, incorporating by reference 40 CFR 60 Subpart OOO, Standards of Performance for Nonmetallic Mineral Processing Plants, as modified by Section 3 of 401 KAR 60:670

401 KAR 51:017, Prevention of significant deterioration of air quality applicable to major construction or modification commenced after September 22, 1982.

1. Operating Limitations:

None

2. Emission Limitations:

Pursuant to 401 KAR 60:670, specifically 40 CFR 60.672(a), emissions of particulate shall not exceed 0.05 gr/dscm and shall not exhibit greater than 7% opacity.

3. Testing Requirements:

- a) Pursuant to 401 KAR 60:670, specifically 40 CFR 60.675(b)(2), the owner and/or operator shall use EPA Reference Method 9 and the procedures in 40 CFR 60.11 to determine opacity, monthly.
- b) Pursuant to 401 KAR 60:670 and 40 CFR 60.675(b)(1), EPA Reference Method 5 or Method 17 shall be performed as required by the Division to determine compliance with the particulate matter concentration emission limit.

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

4. Specific Monitoring Requirements:

Pursuant to 401 KAR 60:670, the permittee shall perform a qualitative visual observation of the opacity of emissions from each stack on a weekly basis and maintain a log of the observations. If visible emissions from any stack are seen, then the permittee shall determine the opacity of emissions by Reference Method 9 and perform an inspection of the control equipment for any necessary repairs.

5. Specific Record Keeping Requirements:

Records of the limestone (tonnages) processed shall be maintained.

6. Specific Reporting Requirements:

Pursuant to 401 KAR 60:670, specifically 40 CFR 60.676, the owner and/or operator shall submit written reports of the results of all performance tests conducted to demonstrate compliance with the standards of 40 CFR 60.672, including reports of opacity observations made using EPA Reference Method 9.

7. Specific Control Equipment Operating Conditions:

- a) The bagfilter/foam shall be continuously operated to maintain compliance with permitted emission limitations, in accordance with manufacturer's specifications and/or standard operating practices.
- b) Records regarding the maintenance and operation of the fabric filter shall be maintained.
- c) See Section E for further requirements.

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Emissions Unit: 15 (8, 9,10,11,14) - Limestone handling

Description:

Equipment includes: Limestone unloading, limestone stockout conveyor (BC-L-1) discharge, limestone storage yard, limestone reclaim conveyor (BC-L-2) & emergency feeder, and limestone recycle dump.

Construction commenced: 1988

Controls: Foam Water Suppression, Enclosures and Bagfilters

Maximum Operating Rates:

1. Limestone unloading, limestone stockout conveyor (BC-L-1) discharge and limestone storage yard: 1500 tons per hour, each
2. Limestone reclaim conveyor (BC-L-2) & emergency feeder: 400 tons per hour
3. Limestone recycle dump: 200 tons per hour

Applicable Regulations:

401 KAR 60:670, incorporating by reference 40 CFR 60 Subpart OOO, Standards of Performance for Nonmetallic Mineral Processing Plants, as modified by Section 3 of 401 KAR 60:670

401 KAR 51:017, Prevention of significant deterioration of air quality applicable to major construction or modification commenced after September 22, 1982.

1. Operating Limitations:

None

2. Emission Limitations:

- a) Pursuant to 401 KAR 51:017, and 401 KAR 60:670, emissions of particulate shall be controlled by foam water suppression/enclosures and bagfilters.
- b) Pursuant to 401 KAR 60:670, specifically 40 CFR 60.672(b), emissions of particulate shall not exceed 0.05 gr/dscm and shall not exhibit greater than 10% opacity.

3. Testing Requirements:

Pursuant to 401 KAR 60:670, specifically 40 CFR 60.675(c), the owner and/or operator shall use EPA Reference Method 9 and the procedures in 40 CFR 60.11 to determine opacity, upon request by the Division. As appropriate, additions for Method 9 testing procedures from 40 CFR 60.675 (c) shall be followed.

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

4. Specific Monitoring Requirements:

- a) Pursuant to 401 KAR 51:017 and 401 KAR 60:670, the permittee shall perform a qualitative visual observation of the opacity of emissions from each stack on a weekly basis and maintain a log of the observations. If visible emissions from any stack are seen, then the permittee shall determine the opacity of emissions by Reference Method 9 and perform an inspection of the control equipment for any necessary repairs.
- b) The permittee shall inspect the control equipment weekly and make necessary repairs to assure compliance.

5. Specific Record Keeping Requirements:

Records of the limestone processed (tonnages) shall be maintained.

6. Specific Reporting Requirements:

Pursuant to 401 KAR 60:670, specifically 40 CFR 60.676, the owner and/or operator shall submit written reports of the results of all performance tests conducted to demonstrate compliance with the standards of 40 CFR 60.672 and 401 KAR 60:6710, including reports of opacity observations made using EPA Reference Method 9.

7. Specific Control Equipment Operating Conditions:

- a) The air pollution control equipments (enclosures, bagfilters and foam water suppression) shall be continuously used to maintain compliance with permitted emission limitations, in accordance with manufacturer's specifications and/or standard operating practices.
- b) Records regarding the maintenance of the air pollution control equipment (including but not limited to enclosures) shall be maintained.
- c) See Section E for further requirements.

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**Emissions Unit 16 (16-29) Fly Ash Handling****Description:**

Equipment includes: Fly ash mechanical collector vacuum systems (Boiler units 1-2, 3-4, 5-6, 7-8, and 9), two fly ash transfer silos, two fly ash disposal silos, conditioned fly ash unloading, dry fly ash & AFBC char/fly ash unloading, AFBC char/fly ash disposal silo, conditioned AFBC char/fly ash unloading, AFBC spent bed material (SBM) disposal silo, conditioned AFBC SBM unloading, and dry AFBC SBM and char/fly ash unloading, and controlled by a baghouse.

Maximum operating rates:

1. Fly ash mechanical collector vacuum systems (for boiler units 1-2, 3-4, 5-6, 7-8, and 9).	18 tons/hr, each
2. Two fly ash transfer silos.	100 tons/hr, each
3. Two fly ash disposal silos.	300 tons/hr
4. Conditioned fly ash unloading.	460 tons/hr
5. Dry fly ash & AFBC char/fly ash unloading.	300 tons/hr
6. AFBC char/fly ash disposal silo.	300 tons/hr
7. Conditioned AFBC char/fly ash unloading.	460 tons/hr
8. AFBC disposal silo.	300 tons/hr
9. Conditioned AFBC SBM unloading.	230 tons/hr
10. Dry AFBC SBM and char/fly ash unloading	200 tons/hr

Reconstruction commenced: 1988

Applicable Regulations:

401 KAR 59:010, New Process Operations applicable to emission units commenced on or after July 2, 1975.

- Operating Limitations:**
None

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

2. Emission Limitations:

- a) Pursuant to 401 KAR 59:010, Section 3(2), particulate matter emissions into the open air from a control device or stack shall not exceed $[3.59(P)^{0.62}]$ lbs/hour, for process weight rates up to 60,000 lbs/hour and $[17.31(P)^{0.16}]$ lbs/hour for process weight rates in excess of 60,000 lbs/hour based on a three-hour average where P is the processing rate in tons per hour.
- b) Pursuant to 401 KAR 59:010, Section 3(1)(a), continuous visible emissions from any stack shall not equal or exceed twenty (20) percent opacity based on a six-minute average.

3. Testing Requirements:

The permittee shall determine the opacity of emissions from each stack by EPA Reference Method 9 upon request by the Division.

4. Specific Monitoring Requirements:

- a) The permittee shall perform a qualitative visual observation of the opacity of emissions from each stack on a weekly basis and maintain a log of the observations. If emissions from any stack are seen, the permittee should log that in the record, and determine the opacity of emissions by EPA Reference Method 9 and instigate an inspection of the control equipment for any necessary repairs.
- b) The permittee shall monitor the processing rate and hours of operation on a weekly basis, and shall use this information to calculate particulate emissions to show compliance with the emission limitation above.

5. Specific Record Keeping Requirements:

Records of the weekly ash processed and weekly hours of operation shall be maintained.

6. Specific Reporting Requirements:

See Section F.

7. Specific Control Equipment Operating Conditions:

- a) The baghouses shall be operated and maintained to maintain compliance with permitted emission limitations, in accordance with manufacturer's specifications and/or standard operating practices.
- b) Records regarding the maintenance of the baghouses shall be maintained.
- c) See Section E for further requirements.

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Emissions Unit 17 (30-31) Fly Ash Handling

Description:

Equipment includes: Fly ash, char/fly ash, SBM, dirt hauling and consolidated waste dry stack pile.

Controls: Water Suppression System/Compaction/Crustover

Maximum operating rate:

1. Fly ash, char/fly ash, SBM, dirt hauling: 775 tons/hr
2. Dirt hauling and consolidated waste dry stack pile: 775 tons/hr

Applicable Regulations:

401 KAR 63:010, Fugitive emissions.

1. Operating Limitations:

- a) Pursuant to 401 KAR 63:010, Section 3, reasonable precautions shall be taken to prevent particulate matter from becoming airborne. Such reasonable precautions shall include, when applicable, but not be limited to the following:
 1. Application and maintenance of asphalt, application of oil, water, or suitable chemicals on roads, material stockpiles, and other surfaces which can create airborne dusts;
 2. Installation and use of hoods, fans, and fabric filters to enclose and vent the handling of dusty materials, or the use of water sprays or other measures to suppress the dust emissions during handling;
- b) Pursuant to 401 KAR 63:010, Section 3, discharge of visible fugitive dust emissions beyond the property line is prohibited.

2. Emission Limitations:

None

3. Testing Requirements:

None

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

4. Specific Monitoring Requirements:

See Section F

5. Specific Record Keeping Requirements:

Records of the fly ash processed (fly ash tonnages) shall be maintained and made available for inspection by any duly authorized representative of the Division for Air Quality.

6. Specific Reporting Requirements:

See Section F, Condition 6.

7. Specific Control Equipment Operating Conditions:

- a) The water spray suppression system and compaction shall be operated and maintained as necessary to ensure the emission units maintain compliance with applicable requirements 401 KAR 63:010, and in accordance with manufacturer's specifications and/or standard operating practices
- b) Records regarding the maintenance and operation of the control equipment (including but not limited to hoods, enclosures, use of dust suppressant/foam, telescopic chute, and water spray system) shall be maintained.
- c) See Section E for further requirements.

SECTION C - INSIGNIFICANT ACTIVITIES

The following listed activities have been determined to be insignificant activities for this source pursuant to 401 KAR 52:020, Section 6. While these activities are designated as insignificant the permittee must comply with the applicable regulation and some minimal level of periodic monitoring may be necessary. Process and emission control equipment at each insignificant activity subject to a general applicable regulation shall be inspected monthly and qualitative visible emission evaluation made. The results of the inspections and observations shall be recorded in a log, noting color, duration, density (heavy or light), cause and any conservative actions taken for any abnormal visible emissions.

DescriptionGenerally Applicable Regulation**Coal Handling**

1. Clamshell bucket #1 to hopper at barge unloader #1-900 tph	401 KAR 63:010
2. Hopper discharge to conveyor BC-11-900 tph	401 KAR 63:010
3. Clamshell bucket #2 to hopper at barge unloader #2-900 tph	401 KAR 63:010
4. Hopper discharge to conveyor BC-12-900 tph	401 KAR 63:010
5. Conveyors BC-11 & BC-12 discharge into surge hopper-1,800 tph	401 KAR 63:010
6. Surge hopper discharge to conveyor BC-2-1,400 tph	401 KAR 63:010
10. Auxiliary stockout conveyor discharge to ground - 1,400 tph	401 KAR 63:010
11. Yard conveyor (open) horizontal movement - 2,500 tph	401 KAR 63:010
15. Pile discharge to reclaim hopper (underpile) at conveyor BC-8 head-700 tph	401 KAR 63:010
16. Discharge from reclaim hopper to conveyor BC-8-700 tph	401 KAR 63:010
17. Pile discharge to reclaim hopper (underpile) at conveyor BC-9 head-1400 tph	401 KAR 63:010
18. Reclaim hopper discharge to conveyor BC-9-1400 tph	401 KAR 63:010
20. Coal bunker exhausts (Boiler Units 1-9) - 4,500 cfm/unit	401 KAR 63:010
21. Coal scales (Boiler Units 1-9)-1,200 cfm/unit	401 KAR 63:010

Ash Handling

1. Bottom ash drain pile-0.5 acre	401 KAR 63:010
2. Transfer bottom ash from drain pile to disposal pile	401 KAR 63:010
3. Bottom ash disposal pile-6.5 acres	401 KAR 63:010

Powerhouse (Units 1-9 and old Unit 10)

1. Hydrogen dump valve vents	NA
2. Loop seal tank vapor extractor	NA
3. Turbine oil tank vapor extractor	NA
4. Seal oil vacuum pump vent	NA

SECTION C - INSIGNIFICANT ACTIVITIES (CONTINUED)**Outside Buildings and Tanks**

1. Water chemistry lab hood exhaust vents (3)	NA
2. Hydrogen trailer ports A & B	NA
3. Transformer clean oil tank-37,590 gal	NA
4. Transformer dirty oil tank-37,590 gal	NA
5. Boiler lighting-off fuel oil tanks (2) -37,500 gal. Each	NA
6. Used circuit breaker oil tank - 10,000 gal	NA
7. Dust Suppresant Chemical tank-3,000 gal	NA
8. Dust Suppresant Chemical tank-4,000 gal	NA
9. Dust Suppresant Chemical tank-500 gal	NA
10. Diesel tanks (2) - est. 12,000 gal each	NA
11. Gasoline tank- est. 10,000 gal	NA
12. Propane tank - 1,000 gal	NA
13. Diesel tank (ash handling area) - 10,000 gal	NA

SECTION D - SOURCE EMISSION LIMITATIONS AND TESTING REQUIREMENTS

1. Particulate, sulfur dioxide, nitrogen oxides, carbon monoxide and visible (opacity) emissions, as measured by methods referenced in Regulation 401 KAR 50:015, Section 1, shall not exceed the respective limitations specified herein.
2. As required by Section 1b of the Cabinet Provisions and Procedures for Issuing Title V Permits incorporated by reference in 401 KAR 52:020, Section 26; compliance with annual emissions and processing limitations contained in this permit, shall be based on emissions and processing rates for any twelve (12) consecutive months.

SECTION E - CONTROL EQUIPMENT CONDITIONS

Pursuant to 401 KAR 50:055, Section 2(5), at all times, including periods of startup, shutdown and malfunction, owners and operators shall, to the extent practicable, maintain and operate any affected facility including associated air pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Division which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source.

SECTION F - MONITORING, RECORD KEEPING, AND REPORTING REQUIREMENTS

1. Pursuant to Section 1b (IV)1 of the Cabinet Provisions and Procedures for Issuing Title V Permits incorporated by reference in 401 KAR 52:020, Section 26, when continuing compliance is demonstrated by periodic testing or instrumental monitoring, the permittee shall compile records of required monitoring information that include:
 - a. Date, place as defined in this permit, and time of sampling or measurements;
 - b. Analyses performance dates;
 - c. Company or entity that performed analyses;
 - d. Analytical techniques or methods used;
 - e. Analyses results; and
 - f. Operating conditions during time of sampling or measurement.
2. Records of all required monitoring data and support information, including calibrations, maintenance records, and original strip chart recordings, and copies of all reports required by the Division for Air Quality, shall be retained by the permittee for a period of five years and shall be made available for inspection upon request by any duly authorized representative of the Division for Air Quality [Sections 1b(IV) 2 and 1a(8) of the Cabinet Provisions and Procedures for Issuing Title V Permits incorporated by reference in 401 KAR 52:020, Section 26].
3. In accordance with the requirements of 401 KAR 52:020 Section 3(1)h the permittee shall allow authorized representatives of the Cabinet to perform the following during reasonable times:
 - a. Enter upon the premises to inspect any facility, equipment (including air pollution control equipment), practice, or operation;
 - b. To access and copy any records required by the permit;
 - c. Sample or monitor, at reasonable times, substances or parameters to assure compliance with the permit or any applicable requirements.
 - d. Reasonable times are defined as during all hours of operation, during normal office hours; or during an emergency.
4. No person shall obstruct, hamper, or interfere with any Cabinet employee or authorized representative while in the process of carrying out official duties. Refusal of entry or access may constitute grounds for permit revocation and assessment of civil penalties.
5. Summary reports of any monitoring required by this permit, other than continuous emission or opacity monitors, shall be submitted to the Regional Office listed on the front of this permit at least every six (6) months during the life of this permit, unless otherwise stated in this permit. For emission units that were still under construction or which had not commenced operation at the end of the 6-month period covered by the report and are subject to monitoring requirements in this permit, the report shall indicate that no monitoring was performed during the previous six months because the emission unit was not in operation [Section 1b (V) 1 of the Cabinet Provisions and Procedures for Issuing Title V Permits incorporated by reference in 401 KAR 52:020, Section 26].

SECTION F - MONITORING, RECORD KEEPING, AND REPORTING

REQUIREMENTS (CONTINUED)

6. The semi-annual reports are due by January 30th and July 30th of each year. Data from the continuous emission and opacity monitors shall be reported to the Technical Services Branch in accordance with the requirements of 401 KAR 59:005, General Provisions, Section 3(3). All reports shall be certified by a responsible official pursuant to 401 KAR 52:020 Section 23. All deviations from permit requirements shall be clearly identified in the reports.
7. In accordance with the provisions of 401 KAR 50:055, Section 1 the owner or operator shall notify the Regional Office listed on the front of this permit concerning startups, shutdowns, or malfunctions as follows:
 - a. When emissions during any planned shutdowns and ensuing startups will exceed the standards notification shall be made no later than three (3) days before the planned shutdown, or immediately following the decision to shut down, if the shutdown is due to events which could not have been foreseen three (3) days before the shutdown.
 - b. When emissions due to malfunctions, unplanned shutdowns and ensuing startups are or may be in excess of the standards notification shall be made as promptly as possible by telephone (or other electronic media) and shall submit written notice upon request.
8. The owner or operator shall report emission related exceedances from permit requirements including those attributed to upset conditions (other than emission exceedances covered by Section F.7. above) to the Regional Office listed on the front of this permit within 30 days. Other deviations from permit requirements shall be included in the semiannual report required by Section F.6 [Section 1b (V) 3, 4. of the Cabinet Provisions and Procedures for Issuing Title V Permits incorporated by reference in 401 KAR 52:020, Section 26].
9. Pursuant to 401 KAR 52:020, Permits, Section 21, the permittee shall annually certify compliance with the terms and conditions contained in this permit, by completing and returning a Compliance Certification Form (DEP 7007CC) (or an alternative approved by the regional office) to the Regional Office listed on the front of this permit and the U.S. EPA in accordance with the following requirements:
 - a. Identification of the term or condition;
 - b. Compliance status of each term or condition of the permit;
 - c. Whether compliance was continuous or intermittent;
 - d. The method used for determining the compliance status for the source, currently and over the reporting period.
 - e. For an emissions unit that was still under construction or which has not commenced operation at the end of the 12-month period covered by the annual compliance certification, the permittee shall indicate that the unit is under construction and that compliance with any applicable requirements will be demonstrated within the timeframes specified in the permit.

SECTION F - MONITORING, RECORD KEEPING, AND REPORTING REQUIREMENTS (CONTINUED)

- f. The certification shall be postmarked by January 30th of each year. Annual compliance certifications should be mailed to the following addresses:

Division for Air Quality
Paducah Regional Office
4500 Clarks River Road
Paducah, KY 42007

U.S. EPA Region IV
Air Enforcement Branch
Atlanta Federal Center
61 Forsyth St.
Atlanta, GA 30303-8960

Division for Air Quality
Central Files
803 Schenkel Lane
Frankfort, KY 40601

10. In accordance with 401 KAR 52:020, Section 22, the permittee shall provide the Division with all information necessary to determine its subject emissions within thirty (30) days of the date the KYEIS emission survey is mailed to the permittee.
11. Pursuant to Section VII (3) of the policy manual of the Division for Air Quality as referenced in 401 KAR 50:016, Section 1(1), results of performance test(s) required by the permit shall be submitted to the Division by the source or its representative within forty-five days after the completion of the fieldwork.

SECTION G - GENERAL CONDITIONS**(a) General Compliance Requirements**

1. The permittee shall comply with all conditions of this permit. Noncompliance shall be a violation of 401 KAR 52:020 and of the Clean Air Act and is grounds for enforcement action including but not limited to termination, revocation and reissuance, revision or denial of a permit [Section 1a, 3 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020 Section 26].
2. The filing of a request by the permittee for any permit revision, revocation, reissuance, or termination, or of a notification of a planned change or anticipated noncompliance, shall not stay any permit condition [Section 1a, 6 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].
3. This permit may be revised, revoked, reopened and reissued, or terminated for cause in accordance with 401 KAR 52:020, Section 19. The permit will be reopened for cause and revised accordingly under the following circumstances:
 - a. If additional applicable requirements become applicable to the source and the remaining permit term is three (3) years or longer. In this case, the reopening shall be completed no later than eighteen (18) months after promulgation of the applicable requirement. A reopening shall not be required if compliance with the applicable requirement is not required until after the date on which the permit is due to expire, unless this permit or any of its terms and conditions have been extended pursuant to 401 KAR 52:020, Section 12;
 - b. The Cabinet or the U. S. EPA determines that the permit must be revised or revoked to assure compliance with the applicable requirements;
 - c. The Cabinet or the U. S. EPA determines that the permit contains a material mistake or that inaccurate statements were made in establishing the emissions standards or other terms or conditions of the permit;
 - d. If any additional applicable requirements of the Acid Rain Program become applicable to the source.

Proceedings to reopen and reissue a permit shall follow the same procedures as apply to initial permit issuance and shall affect only those parts of the permit for which cause to reopen exists. Reopenings shall be made as expeditiously as practicable. Reopenings shall not be initiated before a notice of intent to reopen is provided to the source by the Division, at least thirty (30) days in advance of the date the permit is to be reopened, except that the Division may provide a shorter time period in the case of an emergency.

4. The permittee shall furnish information upon request of the Cabinet to determine if cause exists for modifying, revoking and reissuing, or terminating the permit; or compliance with the conditions of this permit [Section 1a, 7,8 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].

SECTION G - GENERAL CONDITIONS (CONTINUED)

5. The permittee, upon becoming aware that any relevant facts were omitted or incorrect information was submitted in the permit application, shall promptly submit such facts or corrected information to the permitting authority [401 KAR 52:020, Section 7(1)].
6. Any condition or portion of this permit which becomes suspended or is ruled invalid as a result of any legal or other action shall not invalidate any other portion or condition of this permit [Section 1a, 14 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].
7. The permittee shall not use as a defense in an enforcement action the contention that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance [Section 1a, 4 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].
8. Except for requirements identified in this permit as state-origin requirements, all terms and conditions shall be enforceable by the United States Environmental Protection Agency and citizens of the United States [Section 1a, 15 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].
9. This permit shall be subject to suspension if the permittee fails to pay all emissions fees within 90 days after the date of notice as specified in 401 KAR 50:038, Section 3(6) [Section 1a, 10 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].
10. Nothing in this permit shall alter or affect the liability of the permittee for any violation of applicable requirements prior to or at the time of permit issuance [401 KAR 52:020, Section 11(3)(b)].
11. This permit does not convey property rights or exclusive privileges [Section 1a, 9 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].
12. Issuance of this permit does not relieve the permittee from the responsibility of obtaining any other permits, licenses, or approvals required by the Kentucky Cabinet for Environmental and Public Protection or any other federal, state, or local agency.
13. Nothing in this permit shall alter or affect the authority of U.S. EPA to obtain information pursuant to Federal Statute 42 USC 7414, Inspections, monitoring, and entry [401 KAR 52:020, Section 11(3)(d)].
14. Nothing in this permit shall alter or affect the authority of U.S. EPA to impose emergency orders pursuant to Federal Statute 42 USC 7603, Emergency orders [401 KAR 52:020, Section 11(3)(a)].

SECTION G - GENERAL CONDITIONS (CONTINUED)

15. This permit consolidates the authority of any previously issued PSD, NSR, or Synthetic minor source preconstruction permit terms and conditions for various emission units and incorporates all requirements of those existing permits into one single permit for this source.
16. Pursuant to 401 KAR 52:020, Section 11, a permit shield shall not protect the owner or operator from enforcement actions for violating an applicable requirement prior to or at the time of issuance. Compliance with the conditions of a permit shall be considered compliance with:
 - (a) Applicable requirements that are included and specifically identified in the permit and
 - (b) Non-applicable requirements expressly identified in this permit.
17. Pursuant to Section VII 2.(1) of the policy manual of the Division for Air Quality as referenced by 401 KAR 50:016, Section 1.(1), at least one month prior to the date of the required performance test, the permittee shall complete and return a Compliance Test Protocol (Form DEP 6027) to the Division's Frankfort Central Office. Pursuant to 401 KAR 50:045, Section 5, the Division shall be notified of the actual test date at least ten (10) days prior to the test.
 - (b) Permit Expiration and Reapplication Requirements
 1. This permit shall remain in effect for a fixed term of five (5) years following the original date of issue. Permit expiration shall terminate the source's right to operate unless a timely and complete renewal application has been submitted to the Division at least six months prior to the expiration date of the permit. Upon a timely and complete submittal, the authorization to operate within the terms and conditions of this permit, including any permit shield, shall remain in effect beyond the expiration date, until the renewal permit is issued or denied by the Division [401 KAR 52:020, Section 12].
 2. The authority to operate granted shall cease to apply if the source fails to submit additional information requested by the Division after the completeness determination has been made on any application, by whatever deadline the Division sets [401 KAR 52:020 Section 8(2)].
 - (c) Permit Revisions
 1. A minor permit revision procedure may be used for permit revisions involving the use of economic incentive, marketable permit, emission trading, and other similar approaches, to the extent that these minor permit revision procedures are explicitly provided for in the SIP or in applicable requirements and meet the relevant requirements of 401 KAR 52:020, Section 14(2).

SECTION G - GENERAL CONDITIONS (CONTINUED)

2. This permit is not transferable by the permittee. Future owners and operators shall obtain a new permit from the Division for Air Quality. The new permit may be processed as an administrative amendment if no other change in this permit is necessary, and provided that a written agreement containing a specific date for transfer of permit responsibility coverage and liability between the current and new permittee has been submitted to the permitting authority within ten (10) days following the transfer.

(d) Construction, Start-Up, and Initial Compliance Demonstration Requirements

N/A

(e) Acid Rain Program Requirements

1. If an applicable requirement of Federal Statute 42 USC 7401 through 7671q (the Clean Air Act) is more stringent than an applicable requirement promulgated pursuant to Federal Statute 42 USC 7651 through 7651o (Title IV of the Act), both provisions shall apply, and both shall be state and federally enforceable.
2. The source shall comply with all requirements and conditions of the Title IV, Acid Rain Permit (A-98-019) issued for this source. The source shall also comply with all requirements of any revised or future acid rain permit(s) issued to this source.

(f) Emergency Provisions

1. Pursuant to 401 KAR 52:020 Section 24(1), an emergency shall constitute an affirmative defense to an action brought for the noncompliance with the technology-based emission limitations if the permittee demonstrates through properly signed contemporaneous operating logs or relevant evidence that:
 - a. An emergency occurred and the permittee can identify the cause of the emergency;
 - b. The permitted facility was at the time being properly operated;
 - c. During an emergency, the permittee took all reasonable steps to minimize levels of emissions that exceeded the emissions standards or other requirements in the permit; and
 - d. Pursuant to 401 KAR 52:020, 401 KAR 50:055, and KRS 224.01-400, the permittee notified the Division as promptly as possible and submitted written notice of the emergency to the Division when emission limitations were exceeded due to an emergency. The notice shall include a description of the emergency, steps taken to mitigate emissions, and corrective actions taken.
 - e. This requirement does not relieve the source of other local, state or federal notification requirements.
2. Emergency conditions listed in General Condition (f)1 above are in addition to any emergency or upset provision(s) contained in an applicable requirement [401 KAR 52:020, Section 24(3)].

SECTION G - GENERAL CONDITIONS (CONTINUED)

3. In an enforcement proceeding, the permittee seeking to establish the occurrence of an emergency shall have the burden of proof [401 KAR 52:020, Section 24(2)].

(g) Risk Management Provisions

1. The permittee shall comply with all applicable requirements of 401 KAR Chapter 68, Chemical Accident Prevention, which incorporates by reference 40 CFR Part 68, Risk Management Plan provisions. If required, the permittee shall comply with the Risk Management Program and submit a Risk Management Plan to:

RMP Reporting Center
P.O. Box 3346
Merrifield, VA, 22116-3346

2. If requested, submit additional relevant information to the Division or the U.S. EPA.

(h) Ozone depleting substances

1. The permittee shall comply with the standards for recycling and emissions reduction pursuant to 40 CFR 82, Subpart F, except as provided for Motor Vehicle Air Conditioners (MVACs) in Subpart B:
 - a. Persons opening appliances for maintenance, service, repair, or disposal shall comply with the required practices contained in 40 CFR 82.156.
 - b. Equipment used during the maintenance, service, repair, or disposal of appliances shall comply with the standards for recycling and recovery equipment contained in 40 CFR 82.158.
 - c. Persons performing maintenance, service, repair, or disposal of appliances shall be certified by an approved technician certification program pursuant to 40 CFR 82.161.
 - d. Persons disposing of small appliances, MVACs, and MVAC-like appliances (as defined at 40 CFR 82.152) shall comply with the recordkeeping requirements pursuant to 40 CFR 82.166
 - e. Persons owning commercial or industrial process refrigeration equipment shall comply with the leak repair requirements pursuant to 40 CFR 82.156.
 - f. Owners/operators of appliances normally containing 50 or more pounds of refrigerant shall keep records of refrigerant purchased and added to such appliances pursuant to 40 CFR 82.166.
2. If the permittee performs service on motor (fleet) vehicle air conditioners containing ozone-depleting substances, the source shall comply with all applicable requirements as specified in 40 CFR 82, Subpart B, *Servicing of Motor Vehicle Air Conditioners*.

SECTION H - ALTERNATE OPERATING SCENARIOS

None

SECTION I - COMPLIANCE SCHEDULE

None

SECTION J -ACID RAIN PERMIT

ACID RAIN PERMIT CONTENTS

- 1) Statement of Basis
- 2) SO₂ allowances allocated under this permit and NO_x requirements for each affected unit.
- 3) Comments, notes and justifications regarding permit decisions and changes made to the permit application forms during the review process, and any additional requirements or conditions.
- 4) The permit application submitted for this source. The owners and operators of the source must comply with the standard requirements and special provisions set forth in the Phase II Application and the Phase II NO_x Compliance Plan.
- 5) Summary of Actions

1) Statement of Basis:

Statutory and Regulatory Authorities: In accordance with KRS 224.10-100 and Titles IV and V of the Clean Air Act, the Kentucky Natural Resources and Environmental Protection Cabinet, Division for Air Quality issues this permit pursuant to Regulations 401 KAR 52:020, Permits, 401 KAR 52:060, Acid Rain Permit, and Federal Regulation 40 CFR Part 76.

PERMIT (Conditions)

Plant Name: Shawnee Plant
Affected Unit: 1

➤ **SO₂ Allowance Allocations and NO_x Requirements for the affected unit:**

SO ₂ Allowances	Year				
	2004	2005	2007	2007	2008
Tables 2, 3 or 4 of 40 CFR Part 73	3,643*	3,643*	3,643*	3,643*	3,643*

NO _x Requirements	
NO_x Limits	<p>Pursuant to 40 CFR Part 76, the Kentucky Division for Air Quality approves a NO_x standard emissions limitation compliance plan for unit 1. The NO_x compliance plan is effective from January 1, 2004 through December 31, 2008. Under the NO_x compliance plan, annual average NO_x emission rate for each year, determined in accordance with 40 CFR Part 75, shall not exceed the applicable emission limitation, under 40 CFR 76.7(a)(2), of 0.46 lb/mmBTU for dry bottom wall-fired boilers.</p> <p>In addition to the described NO_x compliance plan, this unit shall comply with all other applicable requirements of 40 CFR Part 76, including the duty to reapply for a NO_x compliance plan and requirements covering excess emissions.</p>

* The number of allowances allocated to Phase II affected units by the U.S. EPA may change under 40 CFR part 73. In addition, the number of allowances actually held by an affected source in a unit account may differ from the number allocated by U. S. EPA. Neither of the aforementioned conditions necessitate a revision to the unit SO₂ allowance allocations identified in this permit (See 40 CFR 72.84).

PERMIT (Conditions)

Plant Name: Shawnee Plant
Affected Unit: 2

➤ **SO₂ Allowance Allocations and NO_x Requirements for the affected unit:**

SO ₂ Allowances	Year				
	2004	2005	2007	2007	2008
Tables 2, 3 or 4 of 40 CFR Part 73	3,672*	3,672*	3,672*	3,672*	3,672*

NO _x Requirements	
NO_x Limits	<p>Pursuant to 40 CFR Part 76, the Kentucky Division for Air Quality approves a NO_x standard emissions limitation compliance plan for unit 2. The NO_x compliance plan is effective from January 1, 2004 through December 31, 2008. Under the NO_x compliance plan, annual average NO_x emission rate for each year, determined in accordance with 40 CFR Part 75, shall not exceed the applicable emission limitation, under 40 CFR 76.7(a)(2), of 0.46 lb/mmBTU for dry bottom wall-fired boilers.</p> <p>In addition to the described NO_x compliance plan, this unit shall comply with all other applicable requirements of 40 CFR Part 76, including the duty to reapply for a NO_x compliance plan and requirements covering excess emissions.</p>

* The number of allowances allocated to Phase II affected units by the U.S. EPA may change under 40 CFR part 73. In addition, the number of allowances actually held by an affected source in a unit account may differ from the number allocated by U. S. EPA. Neither of the aforementioned conditions necessitate a revision to the unit SO₂ allowance allocations identified in this permit (See 40 CFR 72.84).

PERMIT (Conditions)

Plant Name: Shawnee Plant
Affected Unit: 3

➤ **SO₂ Allowance Allocations and NO_x Requirements for the affected unit:**

SO ₂ Allowances	Year				
	2005	2005	2007	2007	2008
Tables 2, 3 or 4 of 40 CFR Part 73	3,707*	3,707*	3,707*	3,707*	3,707*

NO _x Requirements	
NO_x Limits	<p>Pursuant to 40 CFR Part 76, the Kentucky Division for Air Quality approves a NO_x standard emissions limitation compliance plan for unit 3. The NO_x compliance plan is effective from January 1, 2004 through December 31, 2008. Under the NO_x compliance plan, annual average NO_x emission rate for each year, determined in accordance with 40 CFR Part 75, shall not exceed the applicable emission limitation, under 40 CFR 76.7(a)(2), of 0.46 lb/mmBTU for dry bottom wall-fired boilers.</p> <p>In addition to the described NO_x compliance plan, this unit shall comply with all other applicable requirements of 40 CFR Part 76, including the duty to reapply for a NO_x compliance plan and requirements covering excess emissions.</p>

* The number of allowances allocated to Phase II affected units by the U.S. EPA may change under 40 CFR part 73. In addition, the number of allowances actually held by an affected source in a unit account may differ from the number allocated by U. S. EPA. Neither of the aforementioned conditions necessitate a revision to the unit SO₂ allowance allocations identified in this permit (See 40 CFR 72.84).

PERMIT (Conditions)

Plant Name: Shawnee Plant
Affected Unit: 4

➤ **SO₂ Allowance Allocations and NO_x Requirements for the affected unit:**

SO ₂ Allowances	Year				
	2004	2005	2007	2007	2008
Tables 2, 3 or 4 of 40 CFR Part 73	3,593*	3,593*	3,593*	3,593*	3,593*

NO _x Requirements	
NO_x Limits	<p>Pursuant to 40 CFR Part 76, the Kentucky Division for Air Quality approves a NO_x standard emissions limitation compliance plan for unit 4. The NO_x compliance plan is effective from January 1, 2004 through December 31, 2008. Under the NO_x compliance plan, annual average NO_x emission rate for each year, determined in accordance with 40 CFR Part 75, shall not exceed the applicable emission limitation, under 40 CFR 76.7(a)(2), of 0.46 lb/mmBTU for dry bottom wall-fired boilers.</p> <p>In addition to the described NO_x compliance plan, this unit shall comply with all other applicable requirements of 40 CFR Part 76, including the duty to reapply for a NO_x compliance plan and requirements covering excess emissions.</p>

* The number of allowances allocated to Phase II affected units by the U.S. EPA may change under 40 CFR part 73. In addition, the number of allowances actually held by an affected source in a unit account may differ from the number allocated by U. S. EPA. Neither of the aforementioned conditions necessitate a revision to the unit SO₂ allowance allocations identified in this permit (See 40 CFR 72.84).

PERMIT (Conditions)

Plant Name: Shawnee Plant
Affected Unit: 5

➤ **SO₂ Allowance Allocations and NO_x Requirements for the affected unit:**

SO ₂ Allowances	Year				
	2004	2005	2007	2007	2008
Tables 2, 3 or 4 of 40 CFR Part 73	3,825*	3,825*	3,825*	3,825*	3,825*

NO _x Requirements	
NO_x Limits	<p>Pursuant to 40 CFR Part 76, the Kentucky Division for Air Quality approves a NO_x standard emissions limitation compliance plan for unit 5. The NO_x compliance plan is effective from January 1, 2004 through December 31, 2008. Under the NO_x compliance plan, annual average NO_x emission rate for each year, determined in accordance with 40 CFR Part 75, shall not exceed the applicable emission limitation, under 40 CFR 76.7(a)(2), of 0.46 lb/mmBTU for dry bottom wall-fired boilers.</p> <p>In addition to the described NO_x compliance plan, this unit shall comply with all other applicable requirements of 40 CFR Part 76, including the duty to reapply for a NO_x compliance plan and requirements covering excess emissions.</p>

* The number of allowances allocated to Phase II affected units by the U.S. EPA may change under 40 CFR part 73. In addition, the number of allowances actually held by an affected source in a unit account may differ from the number allocated by U. S. EPA. Neither of the aforementioned conditions necessitate a revision to the unit SO₂ allowance allocations identified in this permit (See 40 CFR 72.84).

PERMIT (Conditions)

Plant Name: Shawnee Plant
Affected Unit: 6

➤ **SO₂ Allowance Allocations and NO_x Requirements for the affected unit:**

SO ₂ Allowances	Year				
	2004	2005	2007	2007	2008
Tables 2, 3 or 4 of 40 CFR Part 73	3,711*	3,711*	3,711*	3,711*	3,711*

NO _x Requirements	
NO_x Limits	<p>Pursuant to 40 CFR Part 76, the Kentucky Division for Air Quality approves a NO_x standard emissions limitation compliance plan for unit 6. The NO_x compliance plan is effective from January 1, 2004 through December 31, 2008. Under the NO_x compliance plan, annual average NO_x emission rate for each year, determined in accordance with 40 CFR Part 75, shall not exceed the applicable emission limitation, under 40 CFR 76.7(a)(2), of 0.46 lb/mmBTU for dry bottom wall-fired boilers.</p> <p>In addition to the described NO_x compliance plan, this unit shall comply with all other applicable requirements of 40 CFR Part 76, including the duty to reapply for a NO_x compliance plan and requirements covering excess emissions.</p>

* The number of allowances allocated to Phase II affected units by the U.S. EPA may change under 40 CFR part 73. In addition, the number of allowances actually held by an affected source in a unit account may differ from the number allocated by U. S. EPA. Neither of the aforementioned conditions necessitate a revision to the unit SO₂ allowance allocations identified in this permit (See 40 CFR 72.84).

PERMIT (Conditions)

Plant Name: Shawnee Plant
Affected Unit: 7

➤ **SO₂ Allowance Allocations and NO_x Requirements for the affected unit:**

SO ₂ Allowances	Year				
	2004	2005	2007	2007	2008
Tables 2, 3 or 4 of 40 CFR Part 73	3,639*	3,639*	3,639*	3,639*	3,639*

NO _x Requirements	
NO_x Limits	<p>Pursuant to 40 CFR Part 76, the Kentucky Division for Air Quality approves a NO_x standard emissions limitation compliance plan for unit 7. The NO_x compliance plan is effective from January 1, 2004 through December 31, 2008. Under the NO_x compliance plan, annual average NO_x emission rate for each year, determined in accordance with 40 CFR Part 75, shall not exceed the applicable emission limitation, under 40 CFR 76.7(a)(2), of 0.46 lb/mmBTU for dry bottom wall-fired boilers.</p> <p>In addition to the described NO_x compliance plan, this unit shall comply with all other applicable requirements of 40 CFR Part 76, including the duty to reapply for a NO_x compliance plan and requirements covering excess emissions.</p>

* The number of allowances allocated to Phase II affected units by the U.S. EPA may change under 40 CFR part 73. In addition, the number of allowances actually held by an affected source in a unit account may differ from the number allocated by U. S. EPA. Neither of the aforementioned conditions necessitate a revision to the unit SO₂ allowance allocations identified in this permit (See 40 CFR 72.84).

PERMIT (Conditions)

Plant Name: Shawnee Plant
Affected Unit: 8

➤ **SO₂ Allowance Allocations and NO_x Requirements for the affected unit:**

SO ₂ Allowances	Year				
	2004	2005	2007	2007	2008
Tables 2, 3 or 4 of 40 CFR Part 73	3,570*	3,570*	3,570*	3,570*	3,570*

NO _x Requirements	
NO_x Limits	<p>Pursuant to 40 CFR Part 76, the Kentucky Division for Air Quality approves a NO_x standard emissions limitation compliance plan for unit 8. The NO_x compliance plan is effective from January 1, 2004 through December 31, 2008. Under the NO_x compliance plan, annual average NO_x emission rate for each year, determined in accordance with 40 CFR Part 75, shall not exceed the applicable emission limitation, under 40 CFR 76.7(a)(2), of 0.46 lb/mmBTU for dry bottom wall-fired boilers.</p> <p>In addition to the described NO_x compliance plan, this unit shall comply with all other applicable requirements of 40 CFR Part 76, including the duty to reapply for a NO_x compliance plan and requirements covering excess emissions.</p>

* The number of allowances allocated to Phase II affected units by the U.S. EPA may change under 40 CFR part 73. In addition, the number of allowances actually held by an affected source in a unit account may differ from the number allocated by U. S. EPA. Neither of the aforementioned conditions necessitate a revision to the unit SO₂ allowance allocations identified in this permit (See 40 CFR 72.84).

PERMIT (Conditions)

Plant Name: Shawnee Plant
Affected Unit: 9

➤ **SO₂ Allowance Allocations and NO_x Requirements for the affected unit:**

SO ₂ Allowances	Year				
	2004	2005	2007	2007	2008
Tables 2, 3 or 4 of 40 CFR Part 73	3,665*	3,665*	3,665*	3,665*	3,665*

NO _x Requirements	
NO_x Limits	<p>Pursuant to 40 CFR Part 76, the Kentucky Division for Air Quality approves a NO_x standard emissions limitation compliance plan for unit 9. The NO_x compliance plan is effective from January 1, 2004 through December 31, 2008. Under the NO_x compliance plan, annual average NO_x emission rate for each year, determined in accordance with 40 CFR Part 75, shall not exceed the applicable emission limitation, under 40 CFR 76.7(a)(2), of 0.46 lb/mmBTU for dry bottom wall-fired boilers.</p> <p>In addition to the described NO_x compliance plan, this unit shall comply with all other applicable requirements of 40 CFR Part 76, including the duty to reapply for a NO_x compliance plan and requirements covering excess emissions.</p>

* The number of allowances allocated to Phase II affected units by the U.S. EPA may change under 40 CFR part 73. In addition, the number of allowances actually held by an affected source in a unit account may differ from the number allocated by U. S. EPA. Neither of the aforementioned conditions necessitate a revision to the unit SO₂ allowance allocations identified in this permit (See 40 CFR 72.84).

PERMIT (Conditions)

Plant Name: Shawnee Plant
Affected Unit: 10

➤ **SO₂ Allowance Allocations and NO_x Requirements for the affected unit:**

SO₂ Allowances	Year				
	2004	2005	2007	2007	2008
Tables 2, 3 or 4 of 40 CFR Part 73	4,893*	4,893*	4,893*	4,893*	4,893*

NO_x Requirements	
NO_x Limits	Federal Regulation 40 CFR Part 76 does not specify any nitrogen oxides limitation for this Atmospheric Fluidized Bed Unit.

* The number of allowances allocated to Phase II affected units by the U.S. EPA may change under 40 CFR part 73. In addition, the number of allowances actually held by an affected source in a unit account may differ from the number allocated by U. S. EPA. Neither of the aforementioned conditions necessitate a revision to the unit SO₂ allowance allocations identified in this permit (See 40 CFR 72.84).

PERMIT (Conditions)

➤ **Comments, Notes, and Justifications:**

Affected units are nine (9) dry bottom wall fired boilers and one (1) atmospheric fluidized bed boiler.

The atmospheric fluidized bed boiler, unit 10, currently does not have applicable NO_x limits set by 40 CFR part 76.

➤ **Summary of Actions:**

Previous Actions:

1. Draft Phase II Permit (# AR-96-17) including SO₂ compliance was issued for public comments on September 19, 1996.
2. Final Phase II Permit (# AR-96-17) including SO₂ compliance plan was issued on February 21, 1997.
3. Draft Phase II Permit (# A-98-004) was issued with 1998 revised SO₂ allowance allocations and NO_x emissions standard for public comment on December 7, 1998.
4. Final Phase II Permit (# A-98-004) including the 1998 revised SO₂ allowance allocations and NO_x emissions standards was issued on June 18, 1999.
5. Draft Title V with Section J Acid Rain Permit has been proposed for public comment.

Present Action:

Proposed/final Title V with Section J Acid Rain Permit being issued.

SECTION K – NO_x BUDGET PERMIT

1) **Statement of Basis**

Statutory and Regulatory Authorities: In accordance with KRS 224.10-100, the Kentucky Environmental and Public Protection Cabinet issues this permit pursuant to 401 KAR 52:020 Title V permits, 401 KAR 51:160, NO_x requirements for large utility and industrial boilers, and 40 CFR 97, Subpart C.

2) **NO_x Budget Permit Application, Form DEP 7007EE**

The NO_x Budget Permit application for these electrical generating units was submitted to the Division and received on October 30, 2003. Requirements contained in that application are hereby incorporated into and made part of this NO_x Budget Permit. Pursuant to 401 KAR 52:020, Section 3, the source shall operate in compliance with those requirements.

3) **Comments, notes, justifications regarding permit decisions and changes made to the permit application forms during the review process, and any additional requirements or conditions.**

Affected units are nine (9) dry bottom wall fired boilers, and one (1) atmospheric fluidized bed combustor (AFBC). Each unit has a capacity to generate 25 megawatts or more of electricity, which is offered for sale. The units use coal and distillate oil as fuel source, and are used as base load electric generating units.

4) **Summary of Actions**

The NO_x Budget Permit is being issued as part of the initial Title V permit for this source. Public, affected state, and U.S. EPA review will follow procedures specified in 401 KAR 52:100.